

# SAFETY DATA SHEET

SDS No.1021-56006

Date

November 25, 2014

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## 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : VINYLCHLORIDE MONOMER, 100µg/mL in Methanol  
NAME OF MANUFACTURER : GL Sciences Inc.  
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan  
CHARGE SECTION : International Sales Section  
TELEPHONE No. : +81-3-5323-6620  
FACSIMILE No. : +81-3-5323-6621  
PRODUCT No. : 1021-56006  
SDS No. : 1021-56006  
Research use only.

## 2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquids : Category 2  
Acute toxicity - oral - : Category 4  
Eye damage/irritation : Category 2  
Reproductive toxicity : Category 1  
Specific target organ toxicity (Single exposure) : Category 1<Central nervous system, optic organ, systemic toxicity>  
Specific target organ toxicity (Single exposure) : Category 3(anesthesia)  
Specific target organ toxicity (Repeated exposure) : Category 1<Central nervous system, optic organ>

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 Highly flammable liquid and vapour  
H302 Harmful if swallowed  
H319 Cause serious eye irritation  
H360 May damage fertility or the unborn child  
H370 Cause damage to organs <Central nervous system, optic organ, systemic toxicity>  
H336 May cause drowsiness or dizziness  
H372 Cause damage to organs through prolonged or repeated exposure <Central nervous system, optic organ>

PRECAUTIONARY STATEMENTS :

P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. –No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash hands thoroughly after handling.  
P260 Do not breathe fume/gas/mist/vapours.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P303+P361+ P353 IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378	In case of fire: Use appropriate media such as chemical powder or carbon dioxide to extinguish.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330	Rinse mouth.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical attention.
P308+P313	IF exposed or concerned: Get medical attention.
P304+P340	IF INHALED: Remove person to fresh air and a keep comfortable.
P314	Get medical attention if you feel unwell.
P403+ P233+P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	CONTENT	CHEMICAL FORMULA	CAS No.	TSCA INVENTORY	EINECS No.	EC INDEX No.
Methanol	≥ 99.9%	CH <sub>3</sub> OH	67-56-1	Listed	200-659-6	603-001-00-X
Vinylchloride	0.01%	CH <sub>2</sub> =CHCl	75-01-4	Listed	200-831-0	602-023-00-7

4. FIRST AID MEASURES

GENERAL ADVICE	: Consult a physician. Show this safety data sheet to the doctor in attendance.
INHALATION	: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT	: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.
EYE CONTACT	: If possible, remove any contact lenses. Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. Consult a physician immediately.
INGESTION	: Rinse mouth, give plenty of water to dilute the substance. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
FIRE & EXPLOSION HAZARDS	: Toxic, irritating, dust/fume/smoke may be emitted. Carbon monoxide may be foamed.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS	: Firemen should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	: Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
ENVIRONMENTAL PRECATIONS	: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
METHODS FOR CLEAN UP	: Do not touch spilled material without suitable protection. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

HANDLING	: Keep away from ignition sources and ventilate the area — No smoking. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapour or mist. Avoid prolonged or repeated exposure. Handle this product with suitable protection.
STORAGE	: Store away from sunlight, heat and all ignition sources in well-ventilated dry place. Keep container tightly closed. Keep cool(2~10°C).
INCOMOPATIBLE PRODUCTS	: Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits.  
Use adequate ventilation.
- VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Necessary
- PERSONAL PROTECTION
- Respiratory protection : Use respirators approved under appropriate government standards and follow all regulations.
- HAND PROTECTION : Chemical resistant gloves
- EYE PROTECTION : Safety glasses(goggles)
- SKIN PROTECTION : Protective clothing

CONTROL PARAMETERS

CONTENTS	OSHA PEL-TWA	NIOSH REL	ACGIH TLV-TWA
Methanol	200ppm	200ppm	200ppm
Vinylchloride	1ppm	Not established	1ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE : Colorless, clear liquid
- ODOR : Characteristic odor
- pH : No data available
- BOILING POINT : approx.64 °C(Methanol)
- MELTING POINT : -98 °C(Methanol)
- FLASH POINT : 11 °C (TCC) (Methanol)
- EXPLOSIVE LIMITS : 6.0% (lower), 35.6 % (upper) (Methanol)
- VAPOR PRESSURE : 12.3 kPa (at 20°C) (Methanol)
- VAPOR DENSITY : 1.11(Methanol)
- SPECIFIC GRAVITY : 0.729 g/cm<sup>3</sup> (at 20/4°C) (Methanol)
- SOLUBILITY IN
- Water : Miscible
- Organic solvent : Miscible
- PARTITION COEFFICIENT ; n-octanol/water : log Pow: -0.82/-0.66(Methanol)
- AUTOIGNITION TEMPERATURE : 464°C(Methanol)
- DECOMPOSITION TEMPERATURE : No data available

10. STABILITY AND REACTIVITY

- REACTIVITY : Stable under recommended storage conditions.
- CHEMICAL STABILITY : Deteriorated by sun-light.
- CONDITION TO AVOID : Sunlight, heat, open flames, high temperature, sparks, static electrical charge, other ignition sources, moisture
- INCOMPATIBLE MATERIALS : Oxidizers and strong acids
- HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO<sub>2</sub>, Cl, HCl may be formed.

11. TOXICOLOGICAL INFORMATION

We show only the toxicological information of Methanol because this product includes vinylchloride less than 0.1%.

- ACUTE TOXICITY -oral- : rat; LD50 = 6200mg/kg, 9100mg/kg(EHC 196,1997)  
Acute toxicity of Methanol affects primates stronger than rodents(EHC 196,1997).  
Human; LD50=1400mg/kg(DFGOT vol.16,2001).
- SKIN CORROSION/IRRITATION : rabbit: not irritating to skin.(DFGOT vol.16,2001)
- EYE DAMAGE/EYE IRRITATION : rabbit: chemosis (4hr), markedly improved(72hr).(EHC 196,1997))
- RESPIRATORY OR SKIN SENSITIZATION : No data available
- GERM CELL MUTAGENICITY : in vivo test: negative(EHC 196(1997), DFGOT vol.16(2001), PATTY(5th,2001))
- CARCINOGENICITY : No data available
- REPRODUCTIVE TOXICITY : fetal resorption, exencephaly (PATTY(5th,2001), EHC 196(1997), DFGOT vo.16(2001)). Methanol has a potential impact on human development(NTP-CHRHR Monograph,2003).

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SPECIFIC TARGET ORGAN TOXICITY - single exposure -

: Central nervous depression (acute toxicity), metabolic acidosis, visual defect, blindness, headache, dizziness, vomiting, narcosis, death(DFGOT vol.16,2001).

## SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -

: disorder of the eye, blindness(EHC 196(1997), ACGIH(7th,2001)).

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## 12. ECOLOGICAL INFORMATION

## ECOTOXICITY

: Lepomis macrochirus: LC50=15400mg/L/96h  
Brown shrimp: LC50=1340mg/L /96h(EHC 196,1998)

BIODEGRADABILITY : No data available

BIOACCUMULATIVE POTENTIAL : No data available

MOBILITY IN SOIL : No data available

OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol list.

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## 13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

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## 14. TRANSPORT INFORMATION

## IATA

UN NUMBER : 1230

UN PROPER SHIPPING NAME : Methanol

CLASS : 3, flammable liquid (6.1, toxic substances)

PACKING GROUP : II

ADR/RID : 1170, ETHANOL SOLUTION

DOT : 1170, ETHANOL SOLUTION

MARINE POLLUTANT : Not classified

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## 15. REGULATORY INFORMATION

US REGULATIONS : Labeling according to EC Directives; See section 2

EU REGULATIONS : Labeling according to EC Directives; See section 2

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## 16. OTHER INFORMATION

## NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

## Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.